

Yoga and Architecture: A Philosophical Design Approach

An Honors Thesis (HONR 499)

by

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Ball State University
Muncie, Indiana

April 2016

Expected Date of Graduation
May 2016

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Abstract

The aim of this creative thesis project was to investigate the relationship between yoga and architecture. This study connects the philosophy and physicality of the practice of yoga with the poetic nature of architectural design. Through a series of sketches, models, and gestural renderings, a matrix of ideas was formed that could be applied to a physical building design.

The final deliverable of the thesis is represented in a booklet including all the information compiled through the duration of the project. This includes diagrams mapping the conceptual connections of ideas, documentation of models created, precedent studies, program specifications, site conditions, climate analysis, sketches translated into diagrams, and rendered images of conceptual designs.

What started out as an attempt to design a simple place to practice yoga quickly manifested itself in a philosophical study. The nature of the research is more in the connection of elegant *moments* that happen in architecture with the transcendental moments that occur through the practice of yoga.

Acknowledgements

I would like to thank, first and foremost, my thesis advisor, Janice Shimizu for her guidance and thoughtfulness. I also thank my ARCH 402 studio professor, Rachel Dickey, as well as Andrea Swartz, Josh Coggeshall, and the Ball State University College of Architecture and Planning for the continued support and encouragement in all my creative endeavors.

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Introduction

Yoga is a way of life: a practice encapsulating physicality, mentality, and spirituality. Architecture, likewise, is more than the immediate physical structures that people inhabit. This project is an undertaking to express the relationship between the philosophy and physicality of the practice of yoga and architectural design principles.

The first step was to define the categories of yoga moves. This categorization is based partially on the profession standards but with my own discretion as to how to group them. The six that I defined are: Balance, Inversion, Strength, Ground, Twist, and Opener. After having defined these categories, I moved on to identifying the key moments of each. Every movement in yoga is carefully choreographed; the poses are incorporated into the practice for a specific purpose. I included both the literal and the conceptual in regards to this understanding. The third step in this process is the generation of the architectural philosophy as related to the poses. I included both the literal and conceptual translations to create the third layer of conceptual thinking.

The design process became a very simple undertaking after having completed such a rigorous pre-design phase. What I came to realize was that the importance of my project was not in a single final deliverable. It became apparent that one iteration among an infinite amount of possibilities in the process was not a concrete way to end the project. Any single design might have been the best response for the particular program identified, but if applied to another location, site, etc., then the design would not be appropriate. Rather, the poetic relationship of yoga to architecture lent itself to carefully designed *moments* that represent the deeper thinking that went into the project.

Yoga

Yoga is derived from the Sanskrit root word “yuj,” meaning “joining” or “union.” (Brahmananda). This is often interpreted as the union of body and mind, with the end goal of any yoga practice being harmonization and unification through a physical and mental practice. In addition, it can be understood as the connection of movements, breathing, and concentration that occur during a yogic practice.

At the very base level of the practice are *asanas*, or poses, that are the individual movements or pieces that make up the whole of the yoga practice. They are the building blocks that yoga is founded around. The repetition or holding of each *asana* actively engages the body in carefully composed ways. Repetition engages what ancient practitioners have understood to be *tamasic* energy, which overcomes the heaviness of the body and mind. Holding poses, rather, engage *rajasic* energy, which promotes inner purification and overcoming of an agitated mind and body (Kraftsow, 62).

Each *asana* engages one of these two energies, so, when combined, a flow, or *prana*, and balance between holding and repetition is created. This flow of energy is vital to the practice of yoga. A full range of *asanas* leads to the mastery of mind and body.

Architectural Strategy

In the same sense, I am treating architecture as a union of the parts that I investigate independently. There are layers to this process, something to be understood of in terms of the practice of yoga. Each element has its own impacts and character, to which the entire design would be missing key features without. Just as the yoga is an exercise isolating elements of the body, so is architecture. The hand cannot operate

independently without the arm's connecting muscles, bones, and ligaments. Architecture, likewise, is a connection of pieces and parts. A final design is a compilation of all the combined materials and finishes to create a physical building. In a conceptual sense, many iterations of designs, thoughts, and choices lead to the final design that becomes an inhabitable space.

Furthermore, the physical space defined by architecture can be understood in terms of the practice of yoga. For instance, the minute adjustments that occur in the holding moves of yoga require constant contemplation of one's body in space. Similarly, though it may seem permanent, a building is constantly affected by cycles and patterns that occur over time. The sun's position shifting throughout the day creates different qualities and moods to its occupants.

Types of moves

Balance poses, such as Tree, Warrior III, and Dancer, are challenges in which the practicing yogi must hold a pose in one position. This requires a degree of focus and direction that implies both physical and mental balance. It allows the yogi to understand his or her center of gravity. The minute wobbles and adjustments that occur are actually encouraged; these are what make the pose valuable. Balance poses are rooted in equilibrium between forces, requiring a degree of strength and focus. Mentally, these poses reinforce concentration and mental clarity. In direct correlation to architecture, this pose might become a cantilever, balcony, or handrail. Conceptually, places can imply balance via symmetry or an asymmetrical visual balance between contrasting elements: such as light and dark, open and constricted, or vertical and horizontal.

Inversion poses literally invert the yogi upside-down. Often these poses are very challenging, only to be attempted if one is an intermediate yogi. Some challenges include Headstand, Shoulderstand, and Crow. These poses are beneficial because they direct blood flow to the brain, and upon completion of the pose, redirect blood flow to the rest of the body. The key to these poses is the reversal of gravity. The circulatory system is upended, allowing for the rerouting of fluid to the extremities. There are other much more easily achievable poses that invert the yogi, such as Downward Dog, Forward Bend, and Dolphin that employ the same benefits. Mentally, these poses are refreshing and calming. Freshly oxygenated blood in the brain has a soothing effect that is not easily achieved in poses other than inversions. The literal architectural translation includes physical elements such as roof, systems, stairs and skylights. Abstracting these values leads to the incorporation of circulation, slope, and shading as means of addressing inversion poses in a design.

Strength poses, like balance poses, are rooted in challenge. They require determination and muscular endurance in order to hold a stationary pose. Strength poses develop coordination between muscle pairs and engage a level of agility. Mentally, these poses require a degree of persistence, because they can be challenging and sometimes tempting to end due to muscular fatigue. Poses such as Warrior I and II, Chair, and Plank are all excellent strengthening moves with which yogis challenge themselves. The direct relationship of *strength* to architecture is seen in foundation, columns, structure, walls, and tectonics. However, there are many other abstract ways to embody strength in a building's design. Moments that make a person feel small within a space, or form

gestures that clearly redirect the focus to a specific place, achieved by material, scale, or direction changes, all bring a sense of strength to a space.

Grounded or *reclining* poses are completed either seated or lying on a yogi's mat, such as Staff, Boat, Corpse, or Lotus. These poses are crucial for spinal alignment and musculature correction. These poses also encourage relaxation and release of tension, which, in turn, improve flexibility in the deep muscles of the core and back. In the literal sense, these poses connect the yogi with the ground, establishing an unmistakable relationship between body and earth. These poses help to reorient oneself to the present and focus the mind on the space around the body. Seated poses also promote deep breathing, creating a sense of inner calm. Like strength poses, structure and materials are the literal translation of groundedness. Courtyards or central spaces also imply the concept of being grounded as related to circulation through connected spaces.

Twists generally imply an in-and-out motion. They are stretches meant to compress and release the muscles in one way and then the other. These poses release tension and lengthen the spine, increasing mobility in tight muscles. Twists are compliments to each other and must be completed in both directions in order to achieve balance. Side Angle, Revolved Triangle, and Thread the Needle are all opportunities to release both physical and mental tension. High ceilings, balconies, and narrow corridors all have the same characteristics as twist poses: compressing and releasing users within a space. Elements of rhythm, varying degrees of translucency, or change of scale are abstract ways of achieving the in-and-out motion of a twist pose.

Opener poses are an expansion of the muscles. They simultaneously stretch and compress muscles; breathing is slow and catered to the movement of the pose. The

instructor will tell the students to direct their breath to the portion of the body being stretched: a notion that does not literally happen, but it focuses the mind on the stretch and helps to engage the specific muscles of the pose. Typically, these are chest openers, also known as heart openers, which counteract bad posture and open up the muscles of the chest. Some examples include Camel, Sphinx, and Cobbler. This release is a powerful sensation, as the yogi corrects the mistakes that the body commonly sinks into. A direct relationship to architecture is evident in windows, doors, or any aperture element. Conceptually, open atriums, central spaces, and high ceilings also give the impression of an opener pose. These spaces make the visitor feel a sense of release or lightness as spaces open up around them.

It is important to note that there are poses that fall into various categories – these six types were chosen because they each have a very specific way of moving through the pose. The booklet identifies Half Moon as a Balance, Strength, and Inversion pose, which is not uncommon for many *asanas* in the practice of yoga.

Translation of ideas

Conceptual models were helpful in identifying and abstracting the core values of each of these types of poses. In the same understanding of pose to values, the conceptual models ranged from a literal representation to an abstract form. The first model in each series is meant to look like the pose being studied. The second model represents the movement of the pose, and the third model is an abstraction of a space that embodies the energy sought after in the second pose. For instance, the balance series is an abstraction of tree pose, easily observed in the first model (Image 1.1). The second model represents

the strength and minimal contact observed in tree pose (Image 1.2), whereas the third model shows a space that is “strong” on one side and light on the other – a quality



Image 1.1



Image 1.2

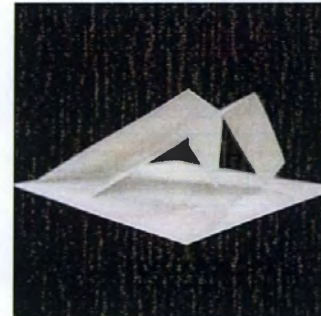


Image 1.3

achieved as one balances with one foot on the ground and the other held against the standing leg in tree pose (Image 1.3).

Precedent studies were then undertaken to begin to understand both the program in mind as well as the physical implementation of yoga in the built environment. Various size and types yoga studios were studied, from home yoga practice spaces to large-scale studios. Ultimately, these precedent studies helped to determine the program as shown in Figure 1.1:

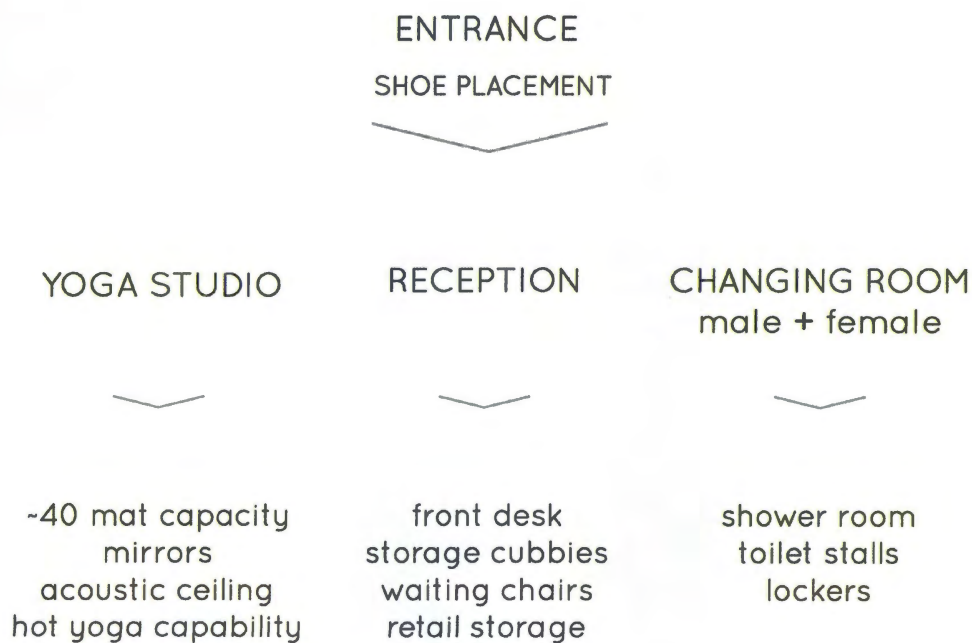


Figure 1.1

The real benefit of the precedent studies was the understanding of the key values of each. For instance, in the Yoga Deva studio, Blank Studio's designers understood the space as a poetic sequence of events. In a similar way, I understood the program as a sequence of gestural events that could be influenced by the cycle of yoga poses – again, understood in abstract terms from the six types of poses investigated.

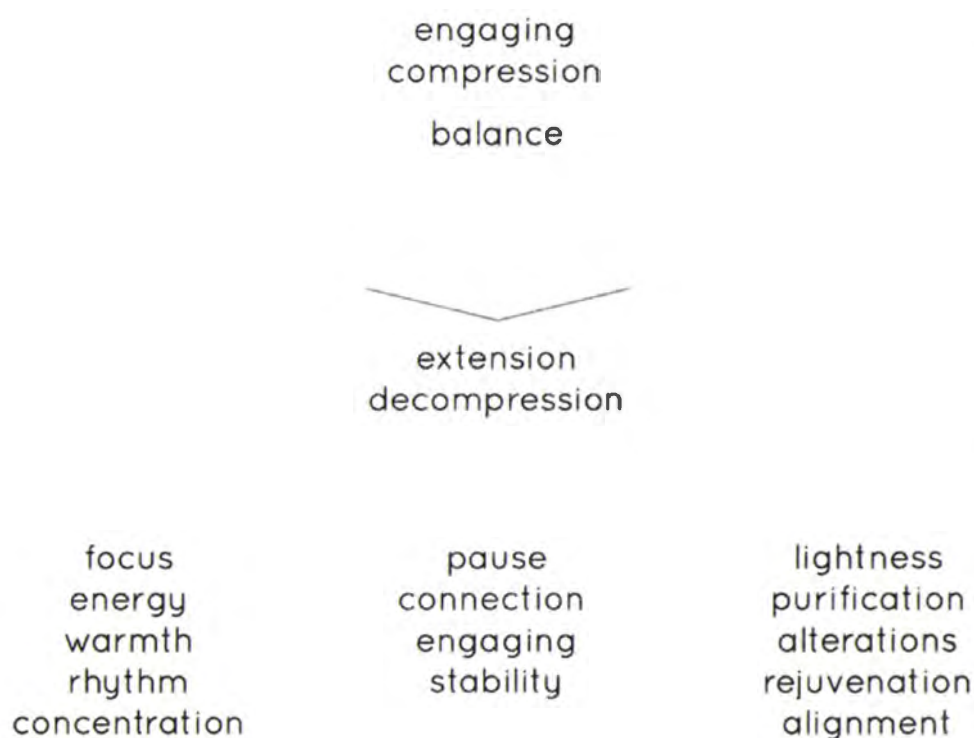


Figure 1.2

Program integration

Using these poses as the base knowledge of translation, the second tier of information was the generator for the conceptual proposed program. Once the proposed program was established, I also proposed the types of spaces I wished to create (Figure 1.2). A Grounded pose would begin the experience, establishing a point of entry that gives the visitor a sense of connection to place prior to starting her practice. This space

would then transition into a Twist pose, compressing the visitor upon arrival and releasing her into the next space. A reception area would embody the values of a Grounded pose, acting as a pause in-between key spaces of the studio. In addition, it would have the stability and engagement of a strength pose before ushering the visitor into the core spaces. A changing room draws from the Opener pose, employing a sense of lightness and purification, cleansing the visitor mentally and physically before moving either in or out of connecting spaces. The heart of the design, of course, is the yoga studio itself. It is a challenging space to determine the best values for, which can vary based on the preferences of the yogis. In some instances, it is beneficial for the space to be simple and enclosed to help a yogi focus on his or her practice. In other cases, a yogi benefit from views out to nature, which can have a healthy impact on the practitioner. I decided that the yoga studio should feel focused like a Balance pose, rhythmic like a Twist, engaged like an Inversion, and warm like an Opener. This is made possible because of the duplication of poses across the categories understood.

Site Consideration

Some precedents considered were not yoga studios at all; they were instead chosen to better understand the site of interest, which was determined to be Thailand. Its historical significance as a destination for practicing yogis as well as its religious identity of Buddhism were the key factors in deciding to site the yoga studio in this region.

There are three distinct seasons in Thailand to be designed for: hot, rainy, and cool (Figure 2.1, 2.2, 2.3). In all instances, the climate is warm and humid, with intermittent showers and very high sun angles, due to its proximity close to the equator.

The takeaways from this site choice are design constraints: elevated floors to protect from flooding, flexible framing to counter earthquakes, a long and thin form to allow for maximized natural ventilation, long overhangs to counter harsh sun angles, and orientation to prevailing winds to optimize natural cooling processes.



Figure 2.1

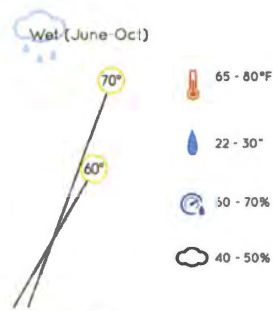


Figure 2.2



Figure 2.3

The materials of interest are also determined based on site selection, opting for a degree of economic and logistic feasibility. Natural materials found in Northern Thailand include high quality white clay, gypsum, limestone, and many varieties of wood. The materials of choice for this projects' purpose include cement wood board, bamboo, lightweight steel framing, and thatch. These materials were determined as the palette available to apply to the designs created.

The precise site chosen is a region in northern Thailand, a city called Chiang Rai. The northern region of Thailand is significantly cooler than the rest of the country, which receives a cool wind from China in the winter months. This region is at a higher elevation and is dotted with forests, which helps to lower the humidity and temperature as compared to the rest of Thailand. An existing site was chosen based on one precedent study: a school that had been redesigned and rebuilt in the aftermath of the devastating 2014 earthquake. The area surrounding the microsite is still in disrepair post-earthquake, so the incorporation of a community yoga studio would be an aid in bringing people

together for a shared identity: a critical value of architecture that I uphold. The end user of a space should influence the entire process of design, because architecture is a practice rooted in people. I kept the users of the yoga studio in mind while moving on to the design process, considering the “appropriateness” of the spaces created.

Design Process

Aside from the individual moments within the space, there is something to be said about the flow between spaces in relation to the connection between spaces. Yoga is not any singular pose; it is rooted in the series of and transitions between poses. The cyclical nature of a *vinyasa*, or flow, is to move through a series of poses that each have their own benefits. By completing a flow, a yogi is working all the parts of the body (Figure 3.1). Different flows work through various series of poses, which in turn, work different families of muscles. It is easy to cater these flows to the type of practice a yogi is attempting to achieve, whether it be strenuous or not.

Likewise, in architecture, the design process is cyclical. Constant adaptations must occur in order to reach a final design. The first pass of the design begins with a



Figure 3.1

concept, which is influenced by the constraints of the program and input from site specifics. Other values to consider include quality of space, structure, material and tectonics, and community interaction, to name a few. Openness to alternatives early on in the design process is necessary, as there is input converging from all directions (Figure 3.2).

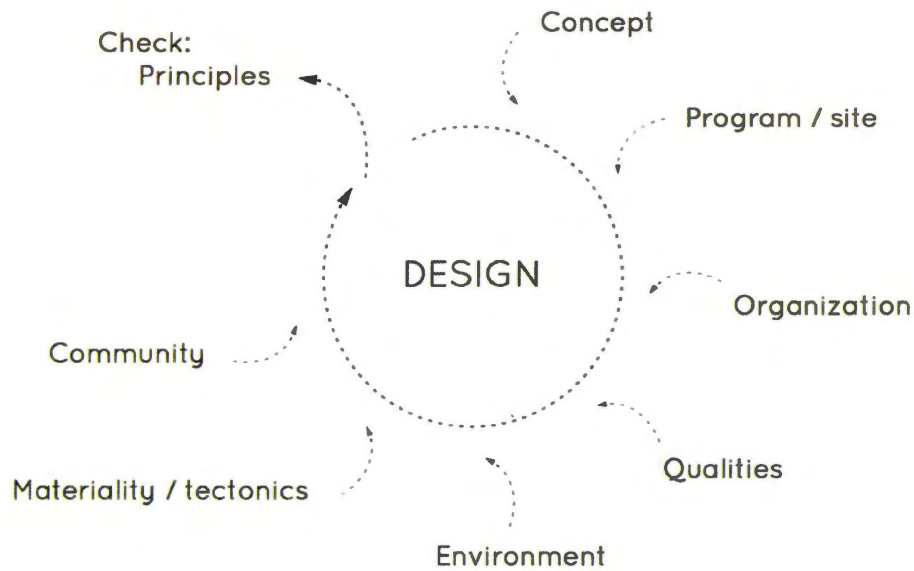


Figure 3.2

Moving into the design portion was an important move to make, because it meant the full adaptation of ideas into physical spaces. I completed this process via a series of

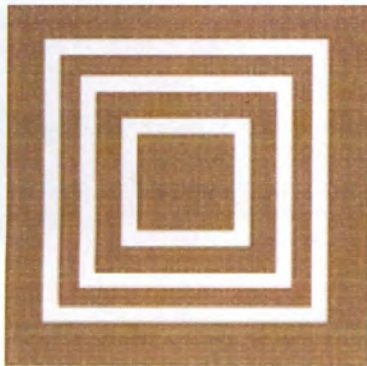


Figure 4.1

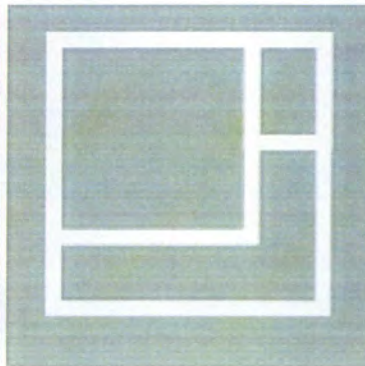


Figure 4.2

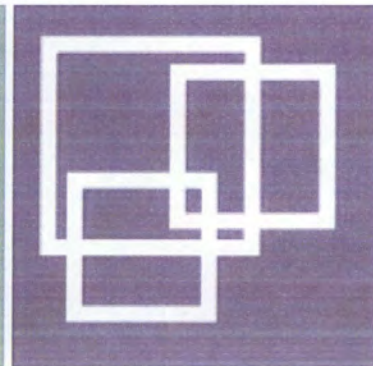


Figure 4.3

guiding organizational concepts: central, procession, and cluster (Figure 4.1, 4.2, 4.3).

These were different schemes meant to organize program, which helped guide the placement and relationship of the program pieces to one another. Gestural sketches were critical during this stage, because they helped me to visualize the conceptual spaces that I had in mind, without fully committing to a singular design: a roadblock that is incredibly

limiting during the design process. For instance, I investigated the different sectional moves that would imply the Balance pose. In Figure 5, three different concepts were explored to create varying degrees of enclosure.

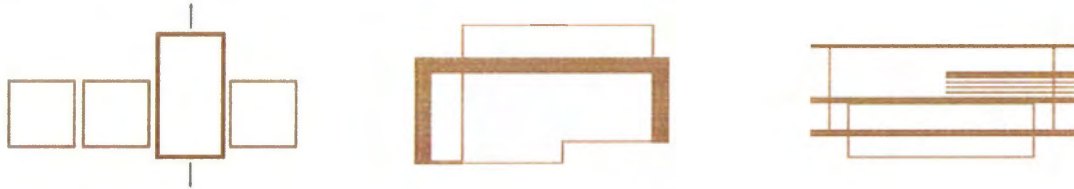


Figure 5

Some concepts were richest in plan view, while others were form-based, and still others as qualities of light or material application. The strongest of these ideas were translated into rendered images. Image 2 shows an organizational move in plan view,



Image 2

based on the idea of a Twist and Grounded flow. The visitor would travel along a straight path as he moves from enclosure to enclosure, but the spaces themselves are offset and rotated, creating a noticeable difference and balance of space. The final enclosure is the static space attributed to the Grounded pose.



Image 4.1

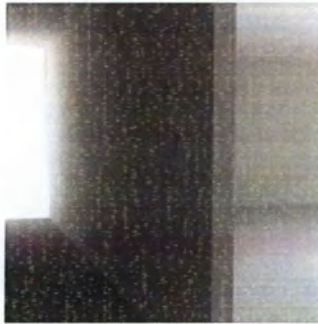


Image 4.2

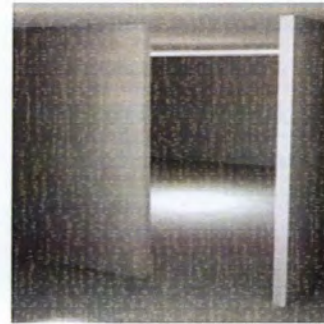


Image 4.3

Another avenue for organizational gestures was the sequencing of spaces, based on quality of the light, as opposed to a form to redirect motion. Based on the minute adjustments that occur when engaging in a Balance pose, these spaces are choreographed around the amount, source, and type of light visible as a yogi moves through the space – which is actually a simple box. As the yogi enters the first corridor, thin ribbons of light filter in from the yoga studio to the right (Image 4.1). At the end of this hallway, the yogi enters into a space drenched in bright, natural light emitted from a large window at the end of the adjoining corridor (Image 4.2). Once inside the yoga studio, diffuse light filters in from above the ceiling level, filling the space with soft, ambient light (Image 4.3). This procession of change of light is also a mental connection, as the mind must be redirected and focused on the pose when attempting balance.



Image 5

Other key moments were designed in the same manner, such as a corridor designed to be an Opener and Inversion. This move also incorporated structure as a means of designing within constraints. A repeated ceiling joist would be necessary to span the length of a corridor and was adapted into an elegant solution that would cast a rhythmic series of shadows into the corridor, causing the yogi to look upwards and feel released due to the openness to the sky above (Image 5). An open space of this caliber would not be achievable in all climates, though: one reason why the selection of such a warm and tropical site such as Chiang Rai is an important distinction.

Building on the mastery of form and spatial quality, materiality was introduced as a method of achieving certain moments of design. The materials chosen refer back to the key materials outlined based on site selection. For instance, a yoga studio space was created to embody the Strength and Balance values, using the interior finishes as a way of



Image 6

reinforcing the desired mood. Light bamboo flooring spans the length of the studio, and dark teakwood clads the wall that the instructor would preside before. The rest of the walls and ceiling are pure white gypsum walls, which catch the soft light that filters down from above the recessed ceiling pane (Image 6). In this way, the elegant and attention-demanding teakwood

wall is balanced by the soft white walls that cover the rest of the studio. The strong materials are located on the floor and on the wall that directs the focus of the yogis to a specific location within space.

Finally, I made an attempt at applying these various *moments* in architecture to a single cohesive design, sited at the Post-Disaster School location determined in the area of interest: Chiang Rai. Three long and linear forms were defined to mimic the existing buildings found on-site. The forms were pushed and pulled to optimize ventilation and provide for an interior courtyard that connects the adjoining spaces. Framed views into and out of the spaces were carefully designed to provide for the qualities of spaces of the yoga studio. Based on the conceptual program outlined, a flow of poses from space to space were designed by identifying the types of poses that direct a yogi through a conceptual flow through the space. The conceptual floor plan shows the types of poses that guide the final design, pin-pointing the poses identified (Figure 6). Materials and finishes appropriate to the region were then applied to the moments within each piece of the program.



Figure 6

As indicative of the cyclical design process, the form, structure, materials, and spaces were redesigned and reconsidered to adjust the final form and layout of the space. This was simply one design solution based on all the levels of input outlined in the proposed site, program, and constraints determined. This one form was not further explored, because it was evident that the moments designed were much more in line with the project intent to relate yoga philosophy to architectural design.

Reflection

This project evolved over time, so it is difficult to say if I reached what I had set out to accomplish. I know that the project had value, because I struggled with it along the way. I let the project drive itself, rather than restricting myself to set deliverables. That being said, if I were to repeat the study, I would give myself more stringent constraints.

The value of this study was my rigorous design process. As I moved into the last phases of the project, I questioned every design move I made. For instance, I felt that a way to accomplish the recreation of the “balance” theme, I needed a series of thin vertical windows spaced apart from each other in a consistent rhythm spanning down a corridor. I carefully analyzed these thoughts, considering different possibilities. This taught me a lot about my own design process and how I conceptualize spaces. I learned that I value moments that occur within a larger scheme, rather than one form to define space.

If I had to approach the study from a different angle, I would simplify my scope considerably. The fact that the project did not end clearly is acceptable, but it could have been a richer study if I had the opportunity to investigate the *moments* I designed as individual studies. I would focus much less on the overall geometry of the spaces being considered and instead begin with a simply box populated by the elegant studies created in this project.

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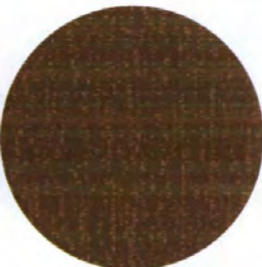
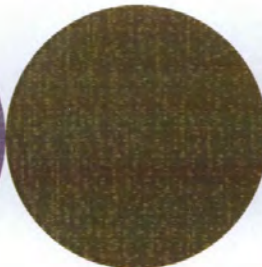
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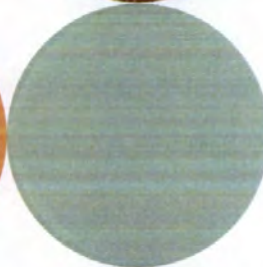
YOGA = UNION



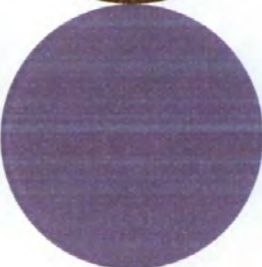
Balance



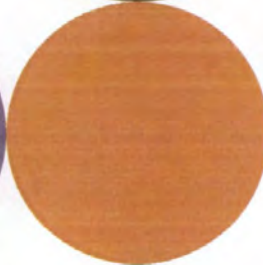
Seated



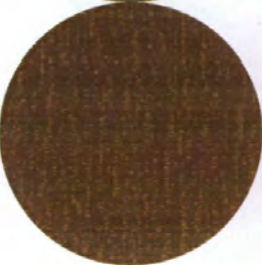
Inversion



Twists



Opener

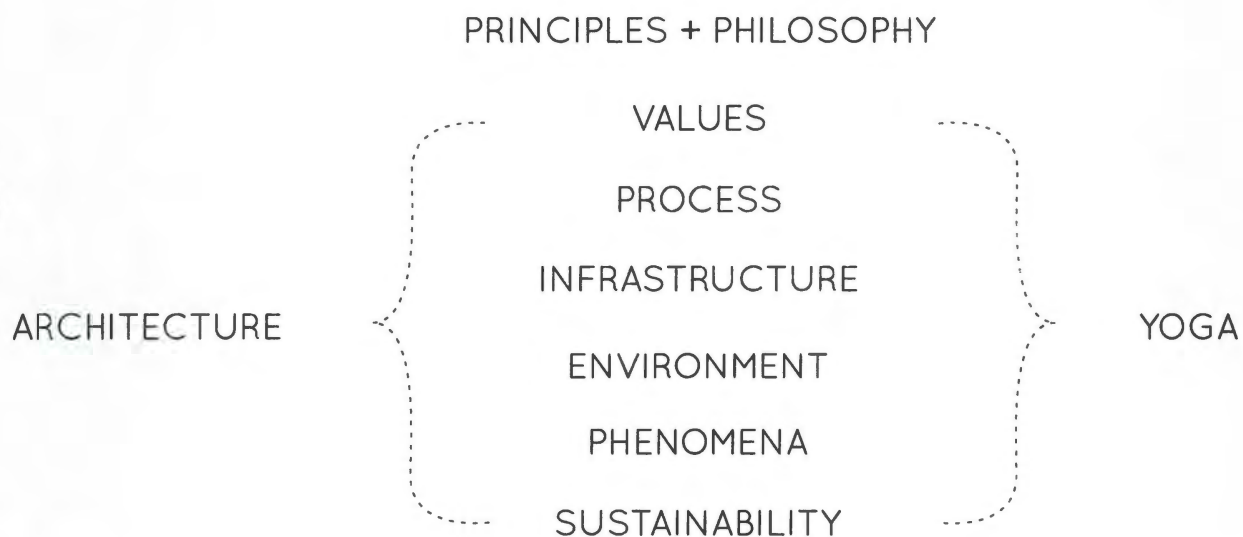


Strength



OBJECTIVE

... to express the relationship between the philosophy and physicality of the practice of yoga and architectural design principles.



BALANCE

Big toe | Tree | Dancer | Half moon | Crane | Tiger | Tiptoe | Warrior III | Side plank



Extension
Challenge
Strength
Focus
Adjustments
Contact
Floating

Cantilever
Balconies
Handrails
Symmetry
Asymmetry



INVERSION

Headstand | Downward dog | Dolphin | Half moon | Forward bend | Plow | Shoulderstand | Scorpion



Defy gravity
Regulation
Circulation
Suspension
Perspective
Range
Movement

Roof
Systems
Circulation
Slope
Shading
Stairs
Skylight



STRENGTH

Chair | Warrior I + II | High + low lunge | Half moon | Plank | Locust | Upward dog | Chaturanga



Grounded
Stability
Strength
Power
Energy
Building

Foundation
Column
Structure
Tectonics
Code
Solid walls



GROUNDING / RECLINING

Boat | Head to-knee | Lotus | Staff | Cow face | Hero | Corpse | Cobra



"Pause"
Stability
Rooted
Connection
Static

Columns
Floors
Material changes
Center
Horizontality
Courtyard



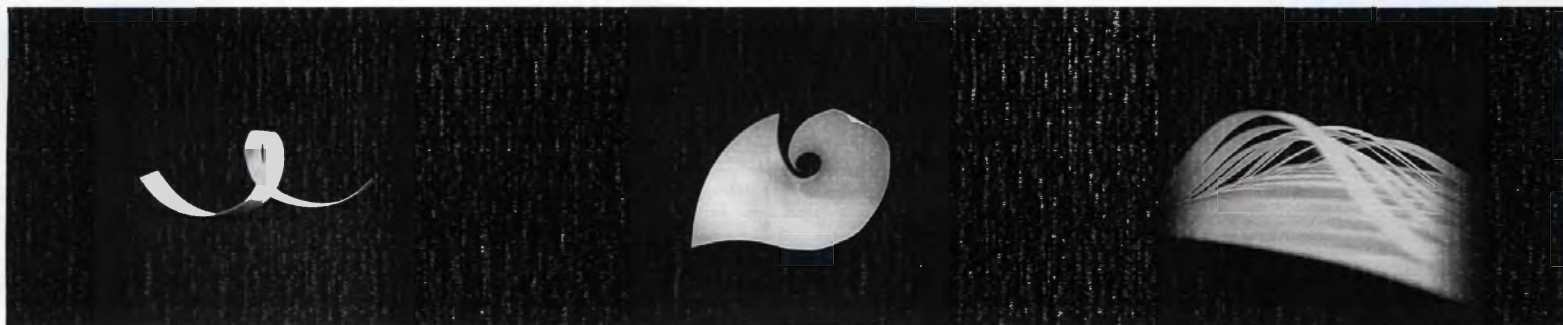
TWISTS

Revolved triangle | Half lord of the fishes | Threading the needle | Revolved half moon | Side angle | Noose



Compression + release
Circulation
In-and-out
Balancing
Neutralizing
Lengthening

Bargeboards
Rooms
High ceilings
Balconies
Rhythm
Translucent



OPENER

Garland | Happy baby | Cobbler | Camel | Upward plank | Fish | Sphinx | Bow



Release
Gradual
Depth
Flexibility
Lightness

Aperture
Corridor
Atrium
Hub
Doorway
Sun shading
Flexible space
Corridor
Curtain wall



Proposed program

engaging
compression
balance

extension
decompression

focus
energy
warmth
rhythm
concentration

pause
connection
engaging
stability

lightness
purification
alterations
rejuvenation
alignment



Home and Yoga Studio | Carter + Burton Architects

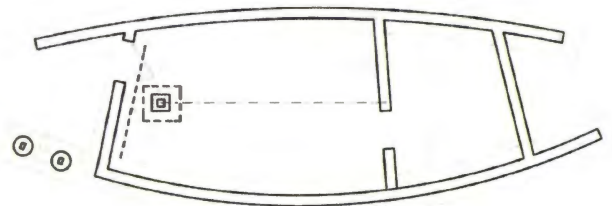
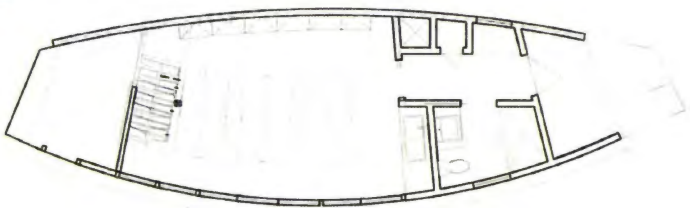
600 s.f. footprint
Clark County, Virginia

First in the southeast U.S. to be awarded the Gold certification in the LEED for Homes Pilot Program, the Yoga Studio features curved structural insulated panels for wall and roof construction, a geothermal mechanical system and a green roof. A bermed entrance to the east and the western end sits high with a deck on the view side feeling like a tree house. The owners, both practicing Buddhists and avid modernists, were interested in creating a weekend retreat from Washington, DC in the Shenandoah Valley.

The natural setting with distant views and nearby rock outcropping were maintained for enjoyment while meditating. The space feels big for spaciousness, views and light while maximizing efficiency and maintaining a modern purity of form and space. The morphology of the curved space inside transports all who visit. This outbuilding fits with the site while maintaining a modern purity of form and space rarely seen in this rural setting. The benefits of utilizing local craftspeople as well as using sustainable materials such as recycled boards, pollution abatement concrete, beeswax and reflective ceiling tiles helps redefine an enduring sense of place. The details, materials, furniture and nature provide the only art expression, freeing the space of metaphysical distractions.

Best qualities:

- Connection to site (visual)
- Site responsiveness
- Environmental response
- Creative use of space
- Warmth
- Inviting
- Compression and release



Ritual House of Yoga | goCstudio

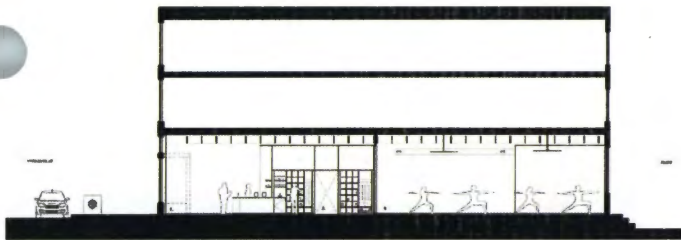
1,350 s.f.
Seattle, WA

"The space was a blank slate with a simple brief; a 40+ person yoga studio, two changing rooms, check-in desk, retail and space for transitioning between classes. The insertion of a central organizing structure allows for separation of the studio space and front of house, with a large sliding wall on its east face.

The introduction of LVL rafters throughout the space creates a natural rhythm which draws the eye from street to alley when the sliding wall is open. The rafters are also intrinsic to the lighting design; LED strips run the length, pointed toward the ceiling to create a gentle glow ideal for inducing a meditative state. The rafters also accommodate structural load and can be used for aerial yoga as well as for hanging display racks in the entry area.

Best qualities:

- Materiality
- Control of light
- Repurposing existing space
- Inviting yoga studio
- Journey / flow of space
- Pause
- Rhythm
- Focus



ELEVATION SECTION
1. ENTRY/CHANGING AREA
2. LOCKER AREA
3. AERIAL YOGA SPACE
4. BATHROOM
5. YOGA STUDIO



FLOOR PLAN
1. ENTRY/CHANGING AREA
2. LOCKER AREA
3. AERIAL YOGA SPACE
4. BATHROOM
5. YOGA STUDIO



Yoga House | WMR Arquitectos

1,800 s.f.
Matanzas, Navidad, Chile

The Yoga House is set on the mountainside of Matanzas beach, overlooking the bay. The primary design intention was to integrate the building within the powerful landscape slope and to derive its poetics from the qualities of its surroundings. The design digs into the hill to ground the house and to generate a backyard (patio), reaching the morning light and to protect this patio and main entrance from the wind. The intention was to view the sea through the house.

The kitchen, dining and living room, are located next to the backyard: a level below the rest of the house, better integrating it with the house. It is constructed of stone while the rest of the house is entirely built out of timber. Designed in a more cozy and intimate manner, the yoga room connects the living with both bedrooms.

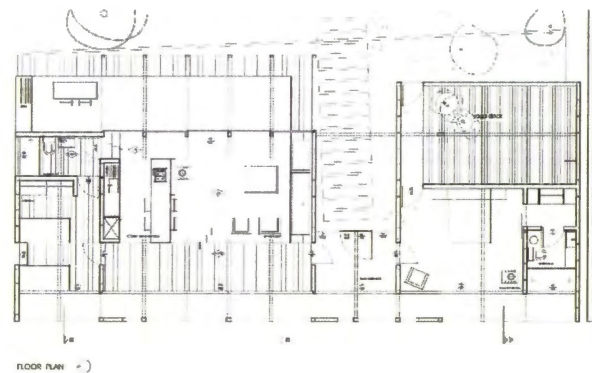
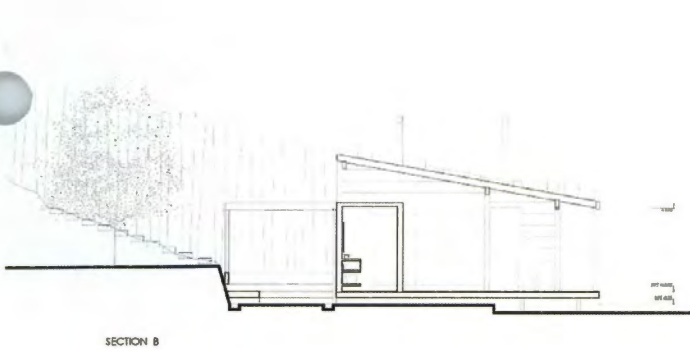
Best qualities:

Connection to site

Tactility

Lightness

Stability



Yoga Deva | Blank Studio

2,800 s.f.
Gilbert, AZ

Yoga Deva (Sanskrit for deity) creates an internal sequence of spaces whose primary impulse is to remove the visitor from the exterior visual environmental conditions in every way. This new internal environment offers an architectural and sequential chiaroscuro to the external strip-mall type reality and prepares the visitor for practice of inward meditation and contemplation.

The project exists as a series of vessels. The ancillary spaces (entry, retail, changing) are ordered and organized around the central yoga studio space. Entry occurs in a space that is visually dark in contrast to the common Arizona exterior experience and no visibility to any other space is offered. The space is long, narrow and rendered in dark pigment, dark wood walls and dark wood millwork; including a communal seating area along the length of the eastern wall illuminated by warm-toned cove lighting. In contrast to the entry space the main studio space is flooded with daylight; the interplay of light is calming and ever-changing.

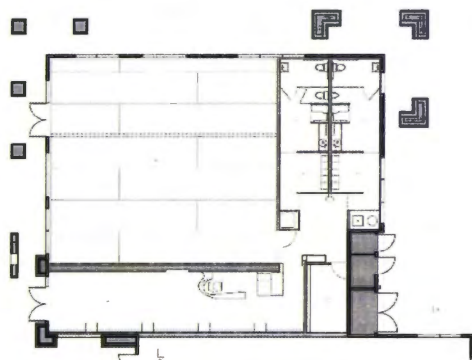
Best qualities:

Connection of spaces

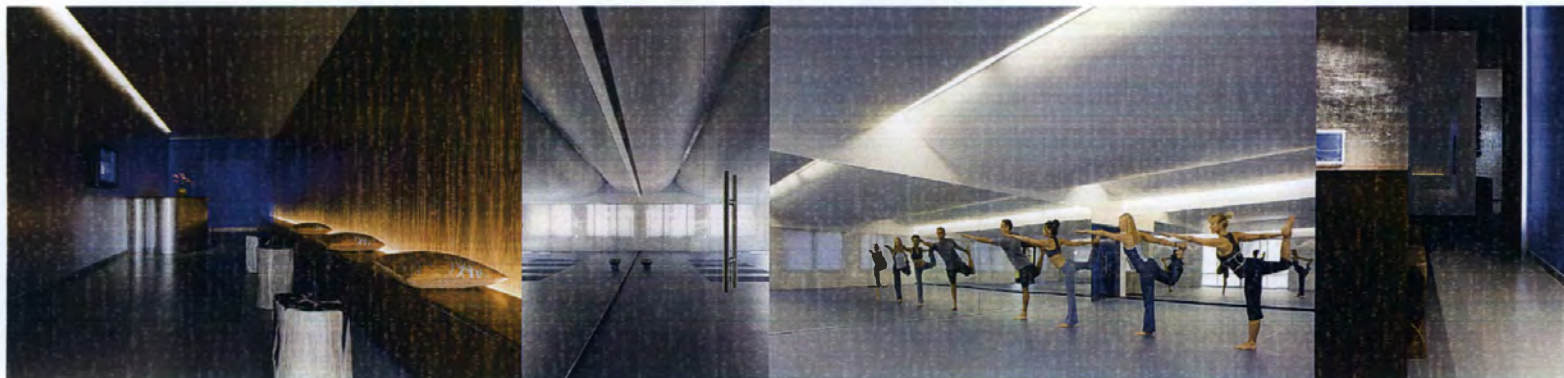
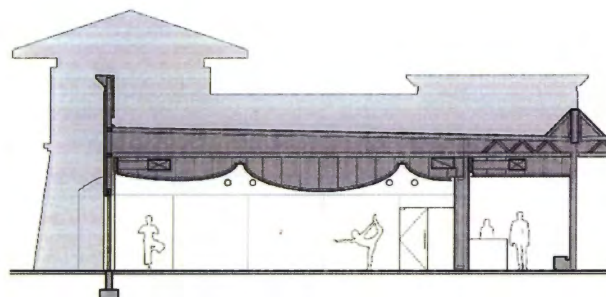
Lightness

Pensiveness / introspection

Opening



SECTION A



Mae Kao Canal House | EKAR & Full Scale Studio

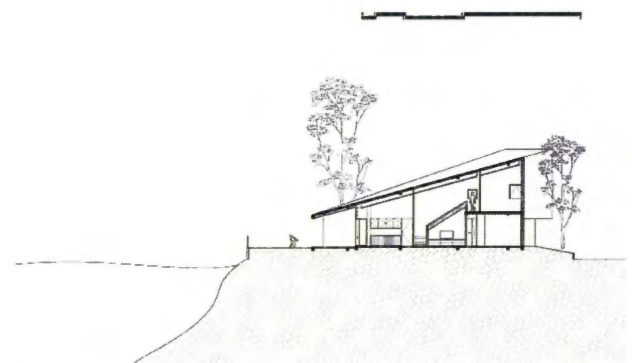
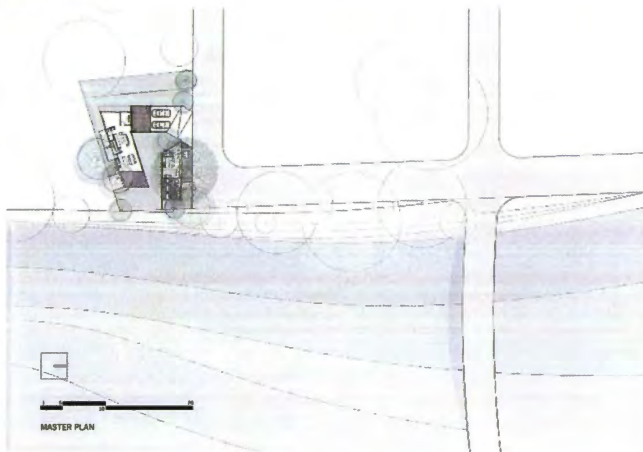
2,900 s.f.
Chiang Mai, Thailand

The house was designed around the large trees existing on-site and was arranged into two volumes. The typical front door was revoked in favor of a garden room that leads its inhabitants to various spaces in the house. The long, narrow entry path instantly opens up and leads one to the canal at the rear of the property from the moment they step into the house. This play creates a direct impact on the visual connection from one end of the property through to the canal.

From inspiration of the traditional community along canals in Thailand to various angular spaces created by revealing and slicing views towards the canal as the key strategy. Inspired by the traditional communities situated along canals in Thailand, the layers of various roof slopes are formed according to the function of each household. As a result, the land width next to the water is normally the shortest dimension which becomes a challenge to maximise this view. The architect resolves this problem by diverting each volume from its main axis and arranging every room so as to gain a visual connection to the water.

Best qualities:

- Connection to tradition
- Procession of space
- Quality of light
- Purification
- Balance



Baan Rai Thaw Si | SOOK Architects

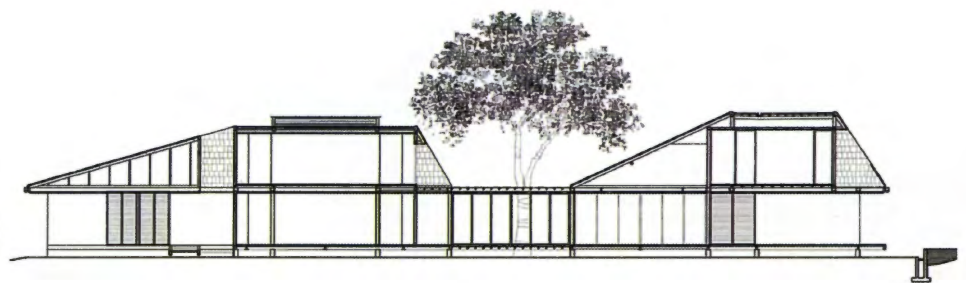
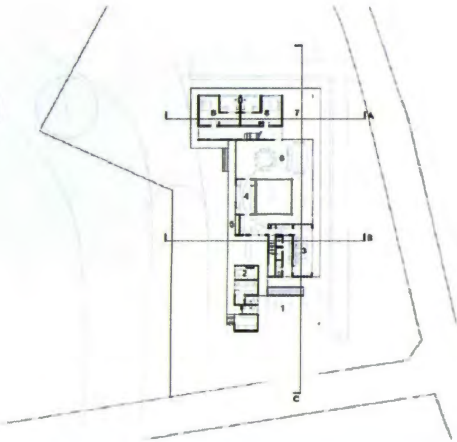
9,000 s.f.
Chang Wat, Thailand

The concept is to design a house that meet the owner's requirements and needs, which is to design a place to hold activities for all ages and can be interchangeable – a common space that can be used for private or public. A house that designs for a good quality living environment, in accordance with the site context and provides better facilities than housing estate requirements.

The house is designed to meet the requirements in housing estates, including more setback- open space than the minimum amount required, color, height, features, natural system for wastewater treatment and self-sufficient in water supply. The design of the house layout is consisted with the existing trees on the site. In order to preserve the existing tree – a native tree, and to fit architecture with nature, the design of the house has a light court in the central of the house to capture the tree.

Best qualities:

- Environmental stewardship
- Quality open space
- Groundedness
- Pause
- Energy
- Focus



Baan Nong Bua School | Junsekino Architect and Design

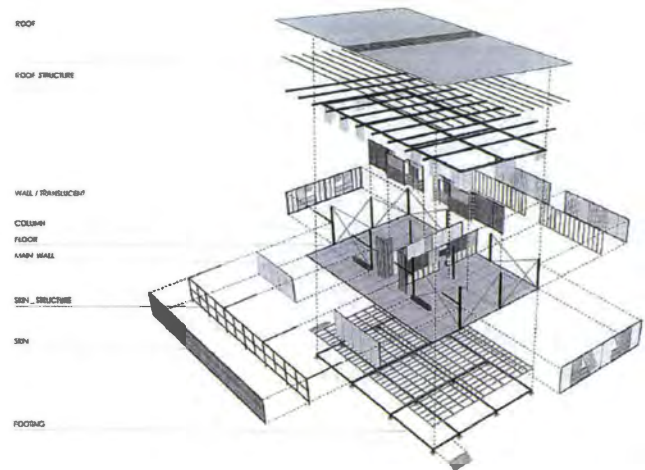
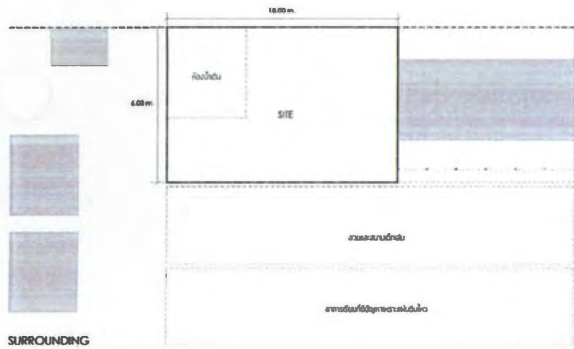
12,300 s.f.
Chiang Rai, Thailand

The school has requested for 4 classrooms with the central space functioning as the children's activity space. The structure of the building is mainly made by steel, because of its ability to absorb the earthquake vibrations and ease of construction in rural areas.

The building is designed to correspond with the weather condition of the northern part of Thailand which allows the circulation of natural air, and the penetration of natural light into the building: thin and light. It was also intended to have a pavilion-like appearance in the style of local rural architecture. The humidity in the rooms is reduced and the floor is also elevated in case of flooding. There is also the space for storing shoes according to Thai culture: guests must remove shoes before entering. The extended eaves can act as a weather shield.

Best qualities:

- Connection to site
- Tactility
- Lightness
- Stability



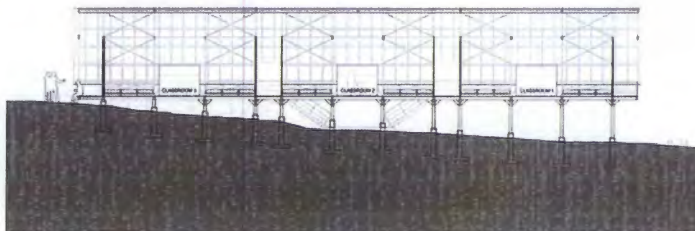
Bann Huay San Yaw- Post Disaster School | Vin Varavarn Architects

1,800 s.f.
Chiang Rai, Thailand

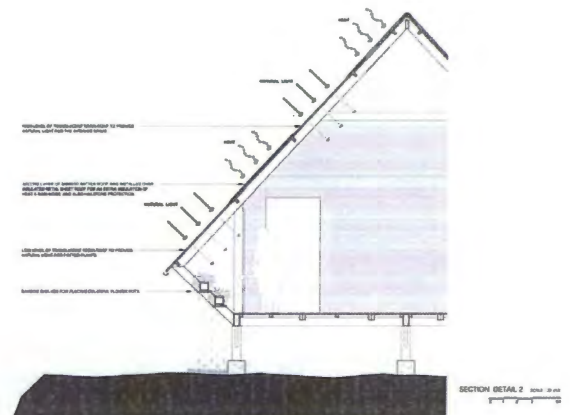
The school needed 3 new standard classrooms for secondary students from tribal families. The design specified that the building must be earthquake resistant, easily constructed by local workers and requiring as low budget as possible. Most of the selected building materials had to be lightweight to reduce horizontal momentum caused by the weight of the building during an earthquake.

"Our design principle was not to create only typical classrooms but learning spaces to enliven the atmosphere. For the layout, we had proposed to combine three classrooms into one building to minimize the land use. Each classroom is punctuated by small foyers which will be used for placing student shoes and to help reducing the noise between classrooms."

Best qualities:
Connection to site
Tactility
Lightness
Stability



SECTION C SCALE 1/100



SECTION DETAIL 2 SCALE 1/20

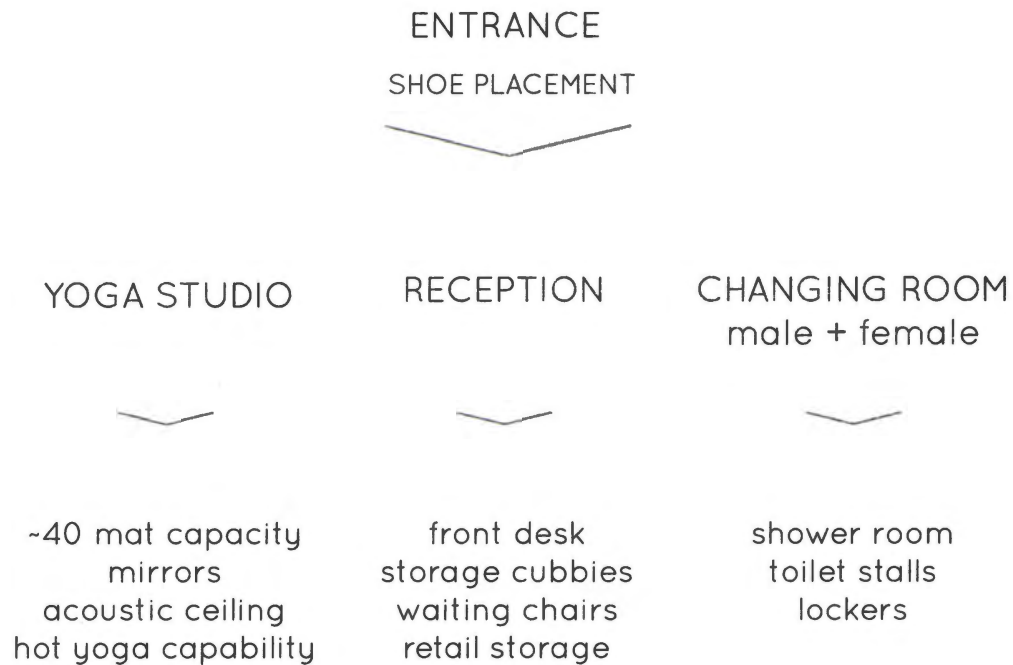


Proposed program

1,600 s.f.

Chiang Rai, Thailand

The program will be a one-studio flexible space to comfortably fit 40 mats. There will be a small entrance with a reception desk and waiting chairs. There will also be some shelf space for retail storage. A shower/changing/toilet room will connect with the entrance.



Proposed program

engaging
compression
balance



extension
decompression

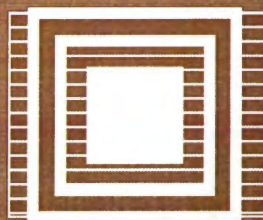
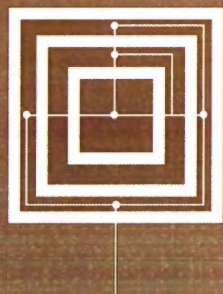
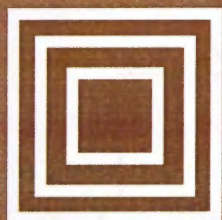
focus
energy
warmth
rhythm
concentration

pause
connection
engaging
stability

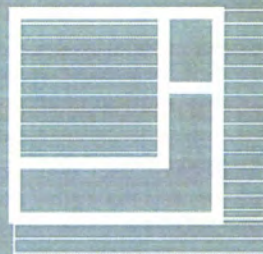
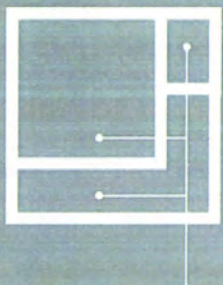
lightness
purification
alterations
rejuvenation
alignment



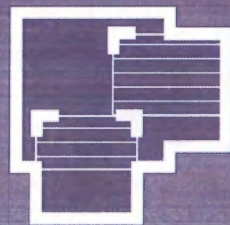
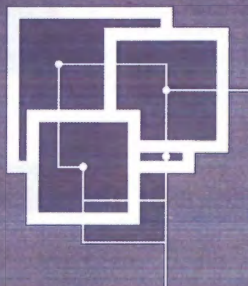
Central



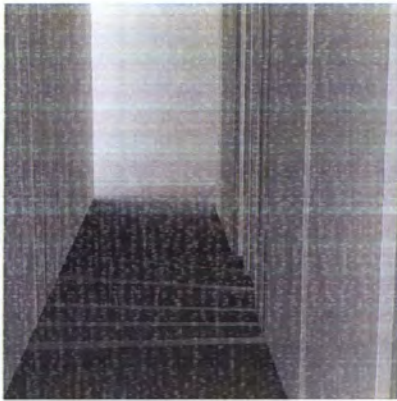
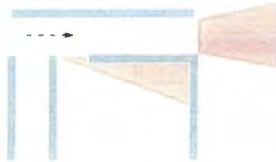
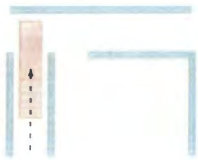
Procession



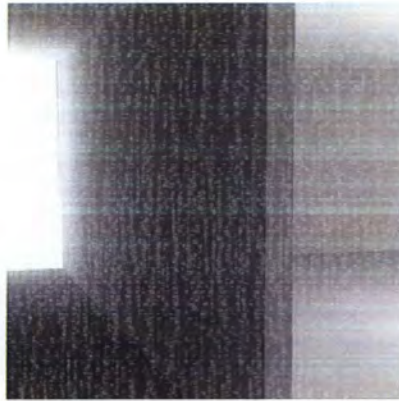
Cluster



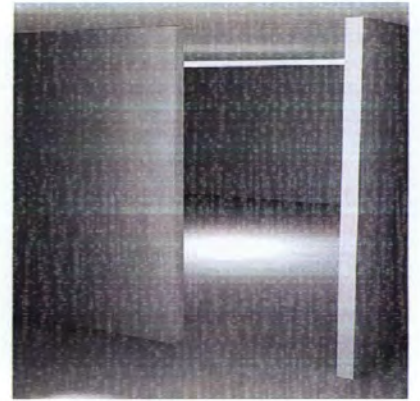
Adjustments



Engage

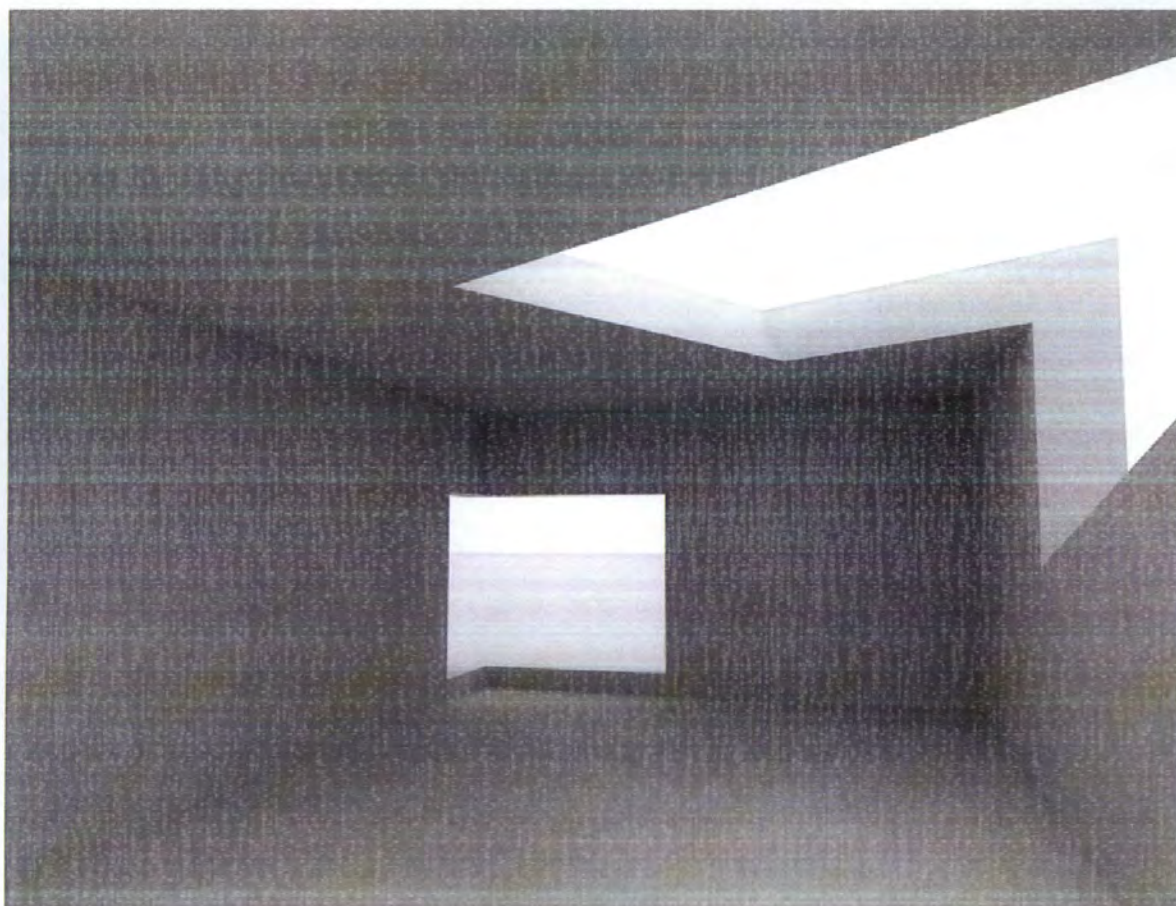


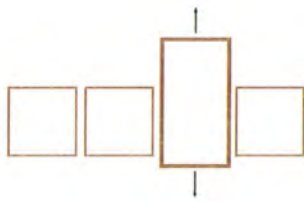
Alter



Focus

Focus

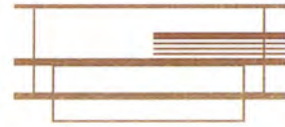




rhythm



regulating geometry



level discrepancies



gesture



framing



degree of enclosure



void

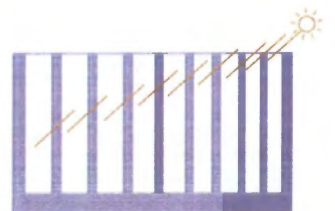
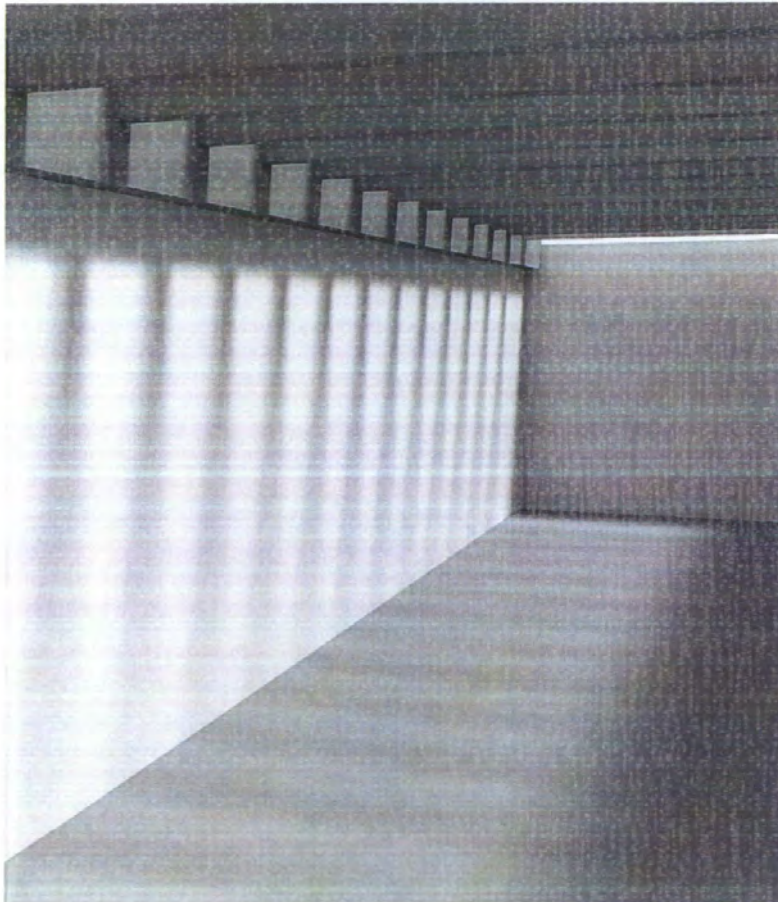


solid

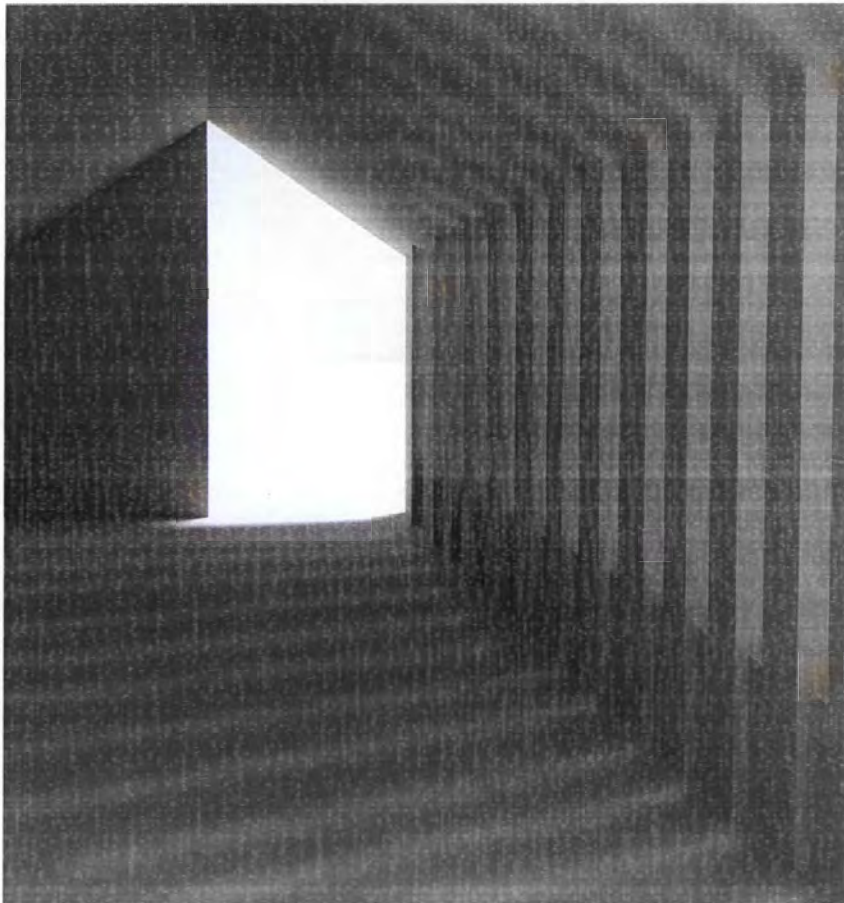


void

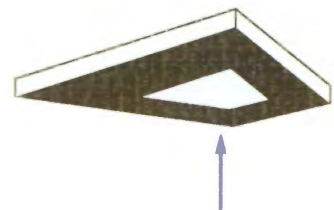
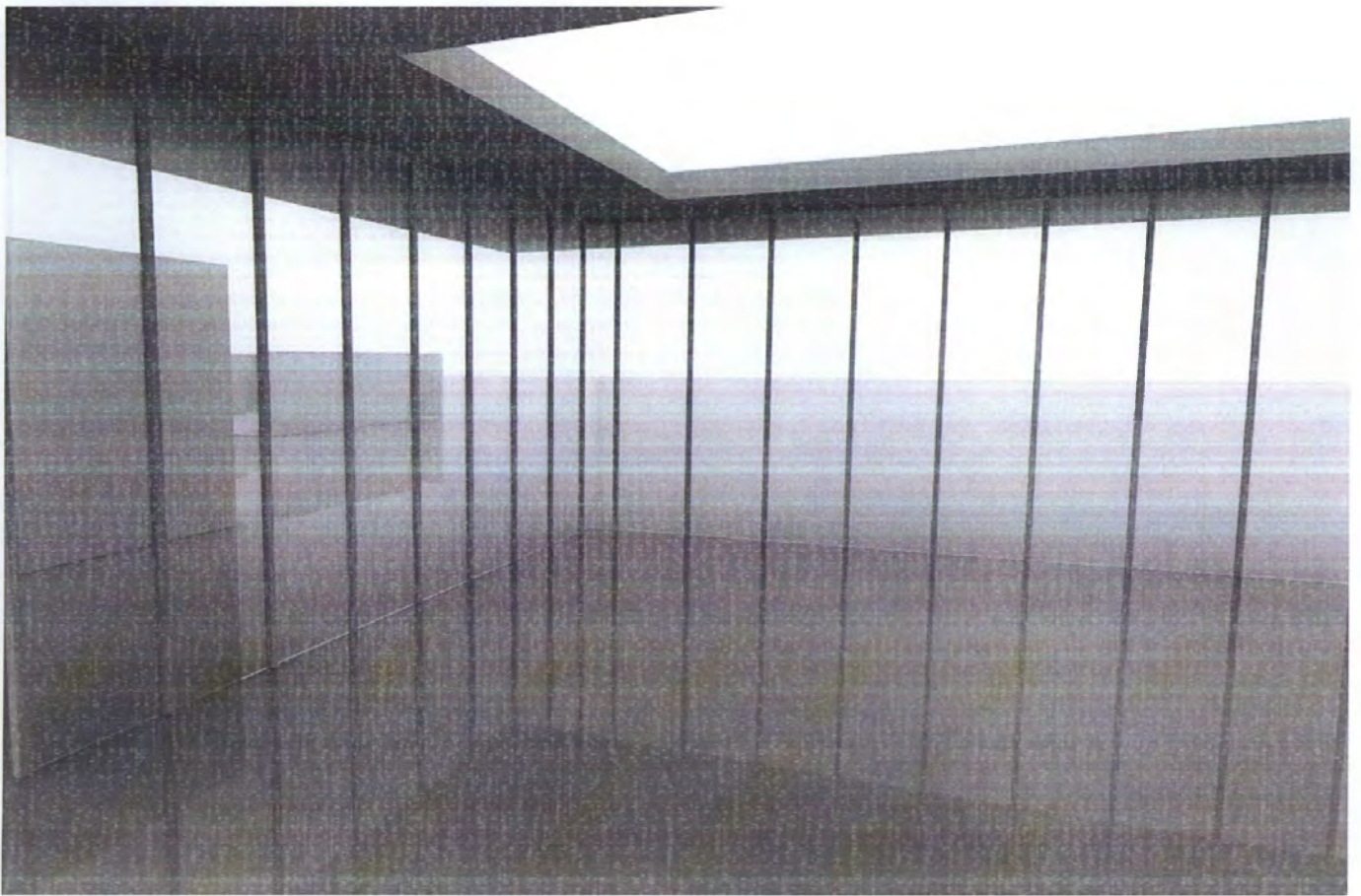
Inversion



Balance



Grounded



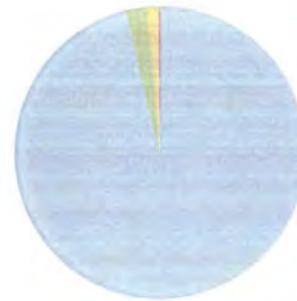
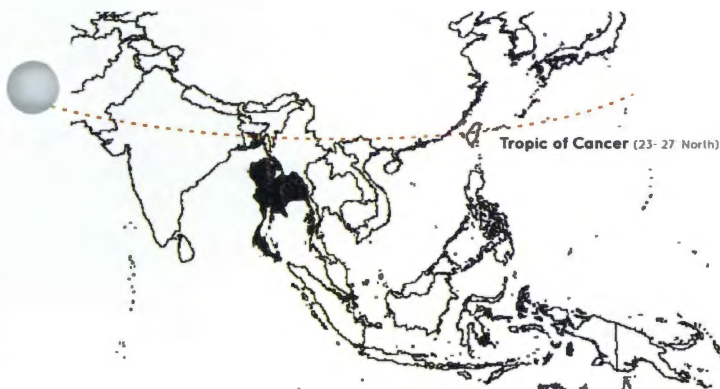
Why Thailand?

Thailand is a common destination for practicing yogis. Its scenic beaches and landscapes draw people from all over the world to reconnect with spirituality.

It is of particular interest in its sensitivity to climate change. Typhoons, earthquakes, and other major natural disasters regularly strike the region.

Design for culture:

- foyer space to put shoes
- large public spaces
- connection to nature
- economically feasible
- hand-built components
- natural / local materials



Buddhism *
Islam *
Christianity
Other (0.3%)

* there is a connection across cultures. Buddhists still practice yoga, as there is a fundamental spiritual connection that is not rooted in a strict religious practice.



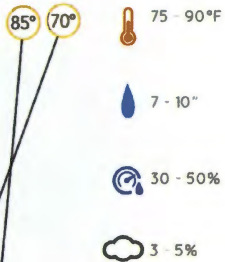
Macroclimate

Thailand's climate is controlled by tropical monsoons and is generally hot and humid across most of the country throughout most of the year. While Thailand's seasons are generally divided into the hot season, cool season, and rainy season, it is most commonly hot and humid for the majority of the year.

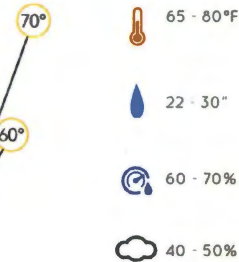
Design for climate:

- elevated floors in the event of a flood
- flexible framing to counter earthquakes
- thin, open form for airflow circulation
- long overhangs for sun angles
- orientation to prevailing winds

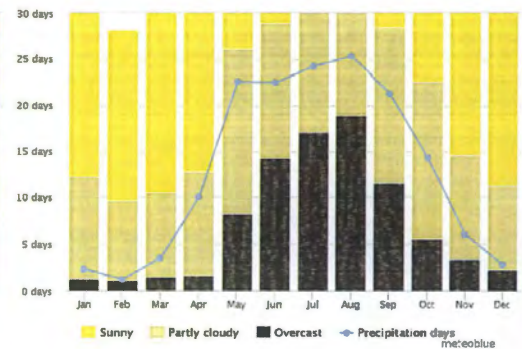
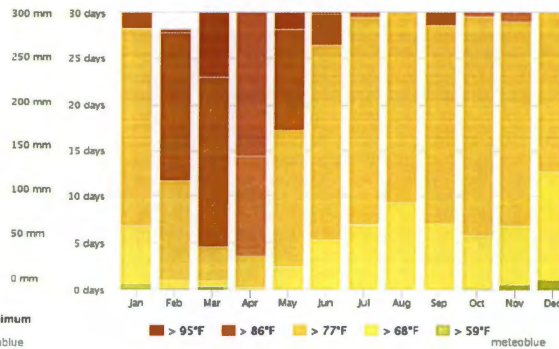
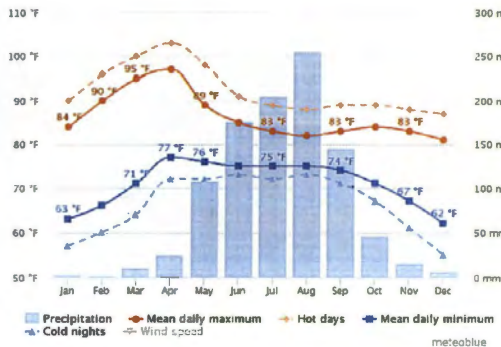
Hot (Mar-May)



Wet (June-Oct)



Cool (Nov-Feb)



Microclimate / Site

Chiang Rai is a cooler region, found in Northern Thailand. The Northeast wind carries the cool weather from China during winter.

The North region of Thailand is elevated with many mountains and forests. Its climate is moderately cold (10-25 °c) during winter because of the Northeast wind. The low relative humidity (69.4%) compared with the other regions creates comfortable weather most of the year. Since there are many forests in the Northern region, insects such as bugs and mosquitoes are very common especially during summer.

Quick statistics:

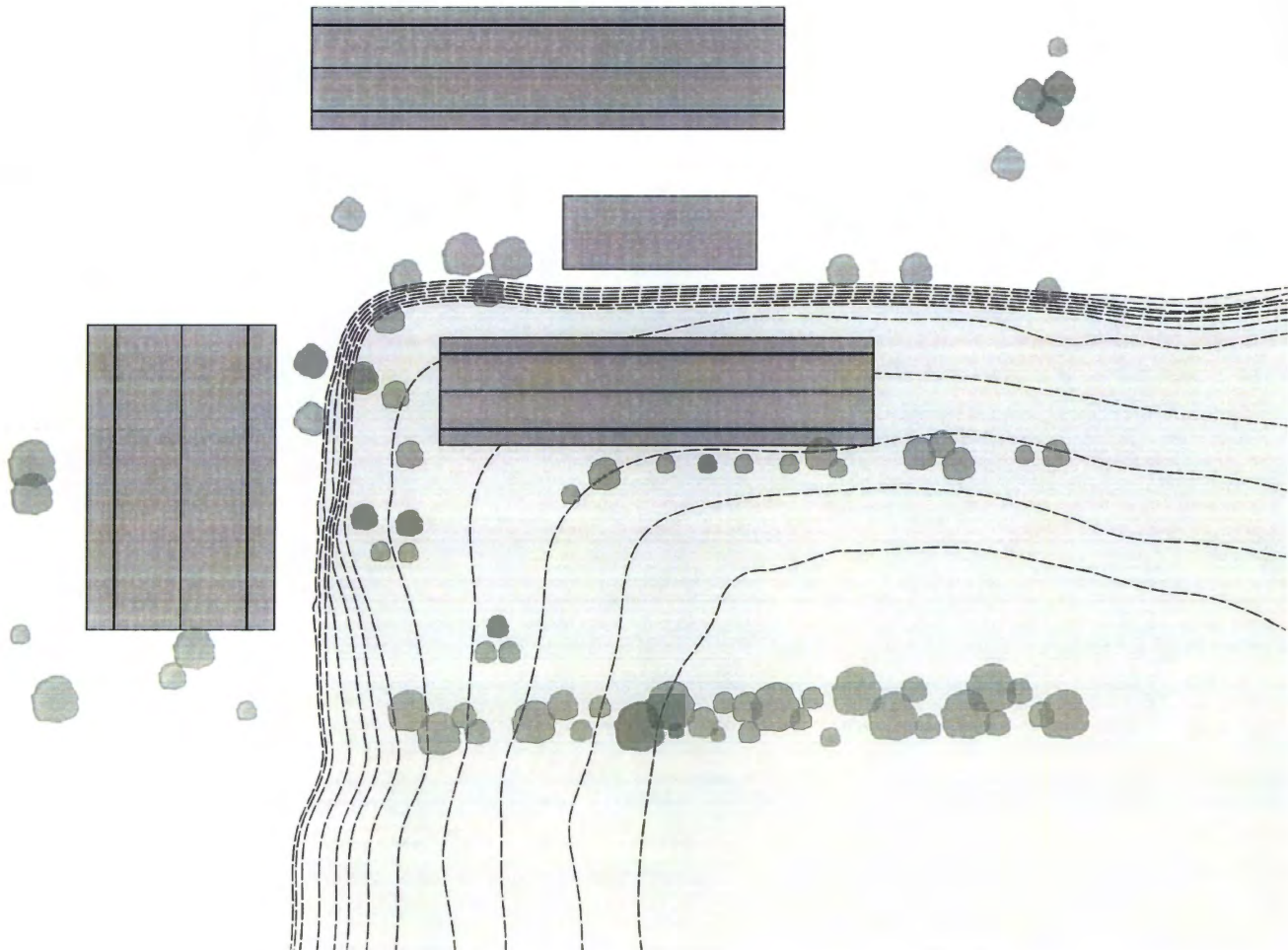
Northeast wind

Cooler climate

Low humidity

Forest region

Proximity to fault line



Materials

The use of economically viable materials is crucial in this under-resourced region. Any donated or repurposed materials are far preferred.

Traditional materials are used in the event that there are local people that know the material well and are familiar with its properties and maintenance.

Natural materials found in Northern Thailand include high quality white clay, gypsum, limestone, river sand (concrete mixture), and of course, many varieties of wood.

- Choice materials:
- Cement wood board
 - Bamboo
 - Lightweight steel frame
 - Thatch

Sustainable materials recommended for Type A

Table 7: Sustainable materials recommended for Type A building

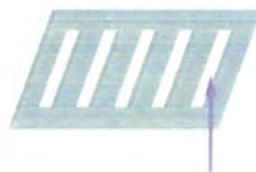
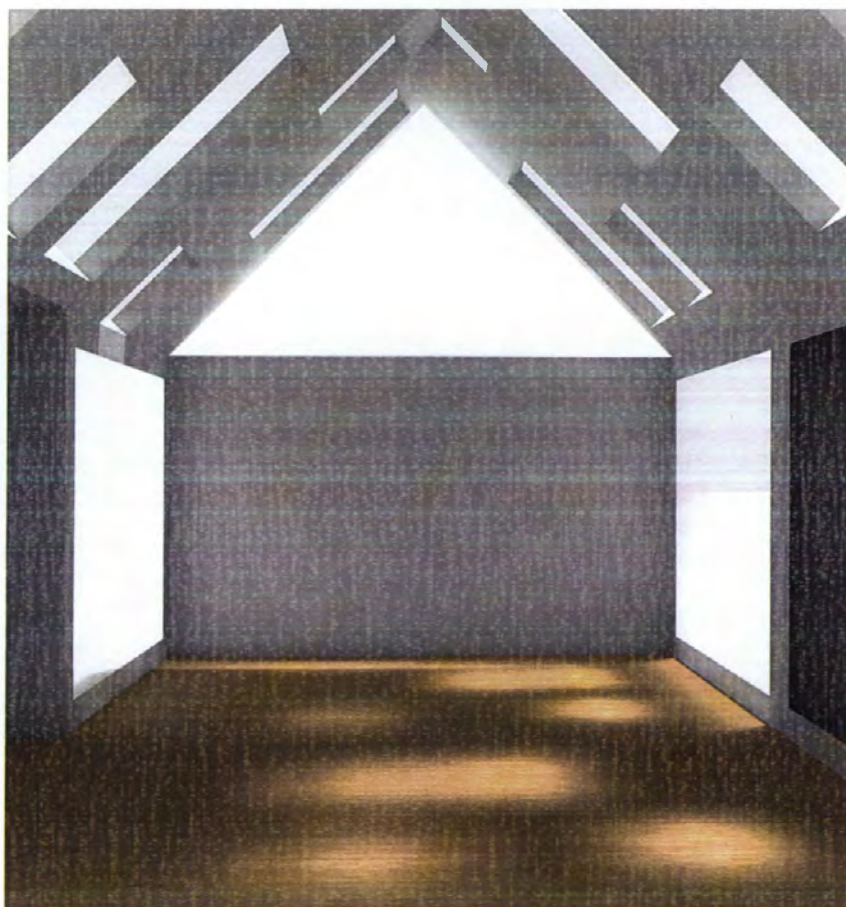
Assembly		Materials I *	Materials II **	Comments	Avoid
structure	column and beam	steel framing	wood	light structure is more appropriate	thermal mass structure
	stairs	wood or steel structure	reinforce concrete	wood and steel stairs require skilled labor	concrete stairs if possible
wall	exterior wall	wood, vinyl composite wall	light weight concrete block	vapor retarder is recommended for composite wall	concrete wall, metal cladding
	interior wall	gypsum board	plywood	-	brick
	wall framing	wood framing	n/a	-	n/a
roof	high slope roof	clay or ceramic tiles	shingle wood tiles	wide overhanging roof is highly recommended	metal sheet or flat roof
	roof framing	steel framing	wood framing	laying clay and wood tiles require closer framing	oversize box-steel
ceiling	insulated ceiling	gypsum board	plywood	add at least one service shaft	aluminum frame
window	louver/ slide/ swing pane	glass or wood louver	plain glass	Insect screen is required	fixed windows
pavement		gravel	blocks	blocks with grass are highly recommended	solid concrete pavement

* Materials I are recommended material for each part of building

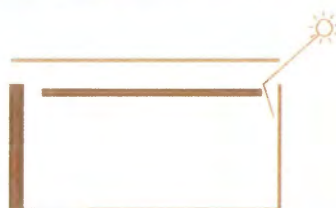
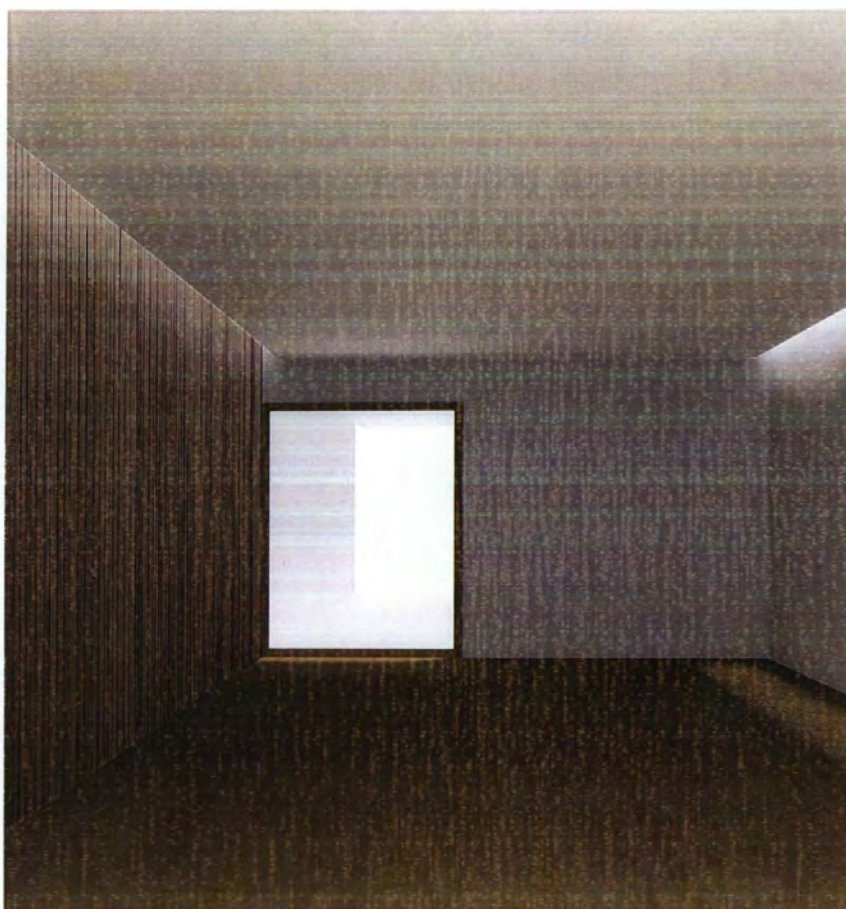
** Materials II are those which are alternatives for each part of the building



Inversion / Opener

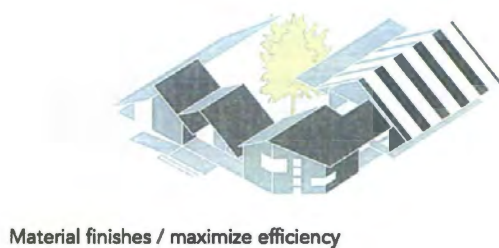
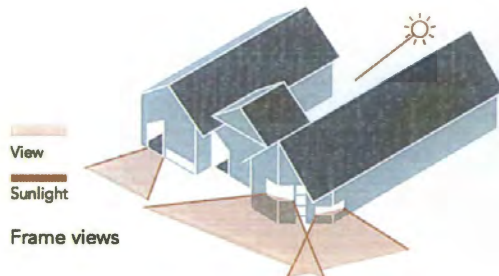
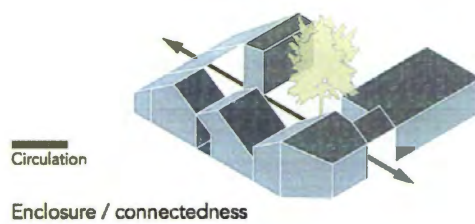
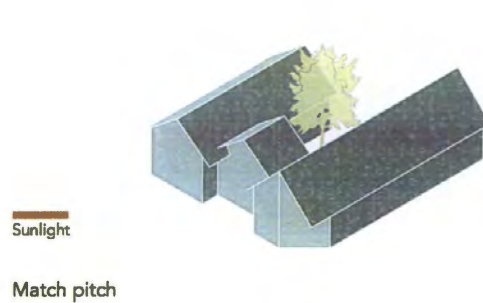
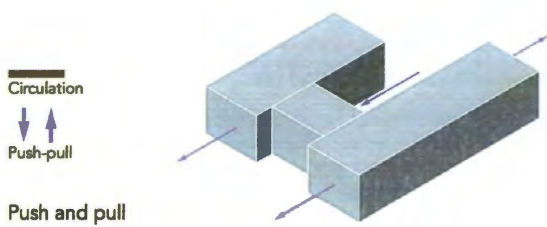
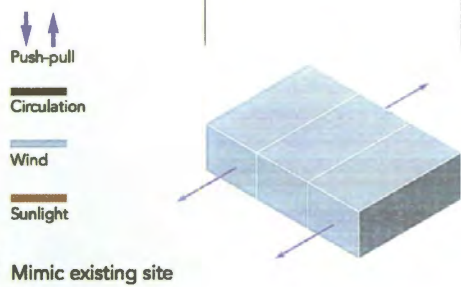
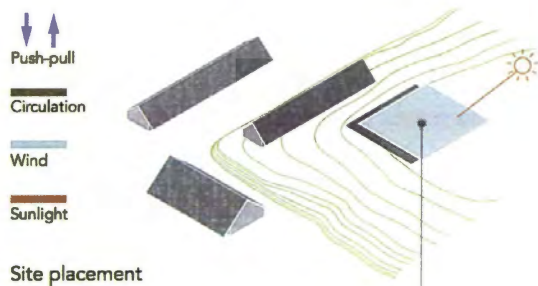


Balance / Strength





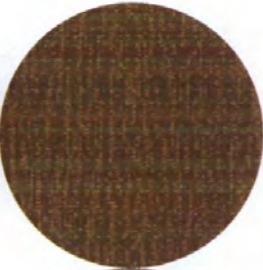
Form Generation



YOGA | UNION



Balance



Seated



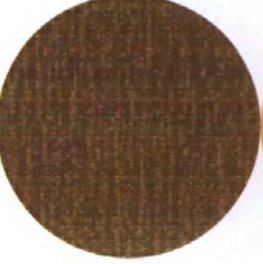
Inversion



Twists



Opener



Strength

